Amendments to the Specification

Please replace the paragraph on page 8, lines 18 through 22 with the following amended paragraph:

In particular, a variety of bacterial expression vectors can be used to express recombinant MraY in bacterial cells. Commercially available bacterial expression vectors which are suitable for recombinant MraY expression include, but are not limited to pQE (~~Qiagen~~ QIAGEN), pET11a (~~Novagen~~ NOVAGEN), lambda gt11 (~~Invitrogen~~ INVITROGEN), and pKK223-3 (~~Pharmacia~~ PHARMACIA).

Please replace the pargraph on page 10, lines 28 through page 11, line 7 with the following amended paragraph:

mraY was cloned into the expression vector pET-11a (~~Novagen~~ NOVAGEN) as described above to create plasmid pPaeMraY. The pET-11a vector allows expression of authentic, non-fusion, proteins. The pET (Plasmids for Expression by T7 RNA polymerase) plasmids are derived from pBR322 and designed for protein over-production in *E. coli*. The vector pET-11a contains the ampicillin resistance gene, and ColE1 origin of replication, in addition to T7 phage promoter and terminator. The T7 promoter is recognized by the phage T7 RNA polymerase but not by the *E. coli* RNA polymerase. A host *E coli* strain such as BL21(DE3)pLysS is engineered to contain integrated copies of T7 RNA polymerase under the control of lacUV5 that is inducible by IPTG. Production of a recombinant protein in the *E. coli* strain BL21(DE3)pLysS occurs after expression of T7RNA polymerase is induced.

Please replace the paragraph on page 12, lines 1 through 15, with the following amendend paragraph:

The MraY (translocase I) assay was performed using the butanol extraction method described by Brandish and coworkers (Brandish *et al.*, 1996 *J. Biol. Chem.* 271(13):7609-7614). The assay was performed at room temperature with assay components held at concentrations of: 100 mM TRIS, pH 7.5; 30 mM $MgCl_2$; 60.2 nCi [^{14}C]UDP-MurNAc-pentapeptide (14 μM); 40 μM Decaprenol phosphate (~~Sigma Chemical Corp~~. SIGMA CHEMICAL CORP.); 0.15% Triton X-100 (w/v); and 100 mg/mL phosphatidyl glycerol (~~Sigma Chemical Corp~~. SIGMA CHEMICAL CORP.). Enzyme concentration was varied in order to obtain linear kinetics. Aliquots (50μl) were removed at varying time points and transferred to a fresh tube containing 50 μl of 6M

pyridinium acetate, pH4.2. The mixture was then extracted with 100 µl butanol and 50 µl water. After brief centrifugation, 80 µl of the top butanol layer was quantitated in a Packard TriCarb PACKARD TRICARB™ scintillation counter to determine the amount of Lipid I product produced.